

Peninsula (200 miles northwest). The climate was generally cooler and more humid, though considerable fluctuation of conditions probably occurred during the time the site was active. The fossils are probably 20,000-40,000 years old, although dating is difficult.

The fossil specimen agrees well with recent specimens of *S. interruptus*. This species is presently considered abundant in California from Humboldt County south to Monterey and eastward to the Sierra Nevada, with scattered rare records elsewhere (Gidaspow, 1968, *Bull. Amer. Mus. Nat. Hist.* 140:135-192). Kavanaugh (1977, *Pan-Pac. Ent.* 53:27-31) and Ingram (1946, *Bull. S. Cal. Acad. Sci.* 45:34-36) have given information on the natural history of this species, which feeds on snails and slugs. The specimen was probably preserved by the asphalt during the Wisconsin Glacial Period, when the southward encroachment of the arctic climate displaced other North American climate zones southward of the equivalent modern zones. A similar southward movement of the species' present range would account for its occurrence in the asphalt deposit. These conclusions are in agreement with previous reports and a preliminary analysis of the fossil insect fauna. A detailed analysis of the fossil insect fauna is in preparation.

In addition to providing evidence of the climatic conditions that prevailed during the periods of preservation, the study of insects from asphalt deposits and other Pleistocene deposits can yield many other benefits. Identification of fossil insects often requires review and clarification of taxonomic problems of the related recent taxa. Not only does identification of the fossils necessitate thorough study of the morphology of the recent species, but the fossils themselves often prominently show morphological features which may be overlooked in the examination of recent specimens. Fossilized aquatic insects may provide data on the nature of bodies of water which may have occurred in the vicinity of the asphalt seeps. Also, the presence of insect species known to be associated with certain stages of decomposition indicates the time period between death and complete preservation of the vertebrates recovered from the same deposits. Additional finds indicate that several insect species previously thought to have been introduced into California are actually native.

Some of the insects from the Carpinteria deposit were loaned to the late Dr. Edwin C. VanDyke in 1930. This material was apparently never studied, and appears to have been lost. — SCOTT E. MILLER, *Santa Barbara Museum of Natural History, Santa Barbara, California.*

The main speaker of the evening was **Donald R. Dilley**, Principle Staff Entomologist, for the California Department of Food and Agriculture. His illustrated talk entitled "California Pest Prevention Systems - Leading to the Eradication of the Gypsy Moth," was enjoyed by all in attendance.

Refreshments, including homemade cookies, were served in the Entomology Conference room following the meeting. — L.G. Bezark, Secretary.

THREE HUNDRED AND EIGHTY-FIRST MEETING

The 381st meeting was held Friday, 21 October 1977 at 7:45 p.m. in the Morrison Auditorium of the California Academy of Sciences, Golden Gate Park, San Francisco, with President Stecker presiding and 37 members and 28 guests present.

The minutes of the meeting held 20 May 1977 were summarized.

The following persons were elected to membership: regular members, Lowe B. Mak, R.A. Beebe; student members, D.G. Casdorff, M.L. Swoveland.

The Society was informed of the passing of noted entomologists, Ira LaRivers, William Hovanitz, Chris Henny, and Aleandre Chneour. President Stecker suggested that letters expressing the Society's feelings be sent to the appropriate family members.

Under notes and exhibits, Dr. Edward Smith of California Academy of Sciences, reported on his progress relating to insect anatomy studies and presented photographic slides from a forthcoming publication.

INSECTS IN FUNGI. — In collecting various fungi in northern California, a consistent pattern of insect fauna within many types of fungal fruiting bodies was observed. A pilot study was carried out and determined that platypezids, syrphids and mycetophilids may dominate one type of mushroom but may be scarce in another. Certain Coleoptera were

found to be the only insects inhabiting one particular bracket fungus. — N.N. HREBTOV, *San Francisco State University, San Francisco, California.*

A NEW NORTHWESTERN RECORD FOR THE TRIBE ATTINI AND NORTHERN RECORD FOR THE GENUS CYPHOMYRMEX (HYMENOPTERA: FORMICIDAE). — The purpose of this note is to report the most northwestern Nearctic record for the tribe Attini and also the northern record of the genus *Cyphomyrmex* on the basis of a male specimen of *Cyphomyrmex wheeleri* Forel collected in Lake County, California by Mr. Hugh B. Leech. It was Dr. George L. Rotramel who studied specimens of our Academy Formicidae, that first recognized the specimen as of special interest and had noted that it should be sent to the Myrmecologist - Dr. Neal A. Weber - for his study.

The ant specimen was sent to Dr. Weber this past winter and he wrote on March 28th that he had identified it as a male of *Cyphomyrmex wheeleri* Forel and he further stated: "I congratulate you for preserving and maintaining this tiny specimen of unusual interest to all myrmecologists. It constitutes the northwestern record of Attini, Latitude 39° 06' N and the northern record of the genus. There ought to be colonies in that area that would well repay biological study." The four labels attached to the pin of this specimen read: "Lucerne, Lake Co./CAL. 30. VII. 1955/Hugh B. Leech" "Attini ♂/? Trachymyrmex/Det. Rotramel '75" "Myrmicinae/?Trachymyrmex/Significant record./ should send to Weber." "Cyphomyrmex wheeleri Forel/det. N.A. Weber 26.iii.77."

The genus *Cyphomyrmex* is a member of the fungus-growing tribe Attini. Of the Attini it has been stated that "their activities in cultivating their fungus gardens are among the most remarkable to be found in ants." (Creighton, 1950, *Bull. Mus. Comp. Zool.* 104:83.). Weber has provided a fascinating account of fungus-growing ants in an article in *Science* (153 (3736):587-604, 1966).

Most of the species of the genus *Cyphomyrmex* are found in the tropical regions of Central America and South America, but two species - *C. rimosus minutus* Mayr and *C. wheeleri* Forel - are recorded by Creighton (1950:316) as occurring in the United States (he provides a lengthy discussion of the first), and only the latter is known from California.

Mallis (1941, *Bull. S. Calif. Acad. Sci.* 40:74) recorded *Cyphomyrmex wheeleri* from "Three Rivers (Culbertson)." Presumably this is the Three Rivers in Tulare County, and if so, this places the Lucerne locality some 420 airline km NW of Three Rivers. Cook in 1953 (*The Ants of California*, pp. 215-216) recorded the same collection. — PAUL H. ARNAUD, JR., *California Academy of Sciences, Golden Gate Park, San Francisco, California.*

DR. WILLIAM HOVANITZ: Dr. Hovanitz died 14 September 1977 of a sudden heart attack in Santa Barbara, California. Born in Chicago, 6 November 1915, he came to California in 1918. He attended the University of California at Berkeley, where he earned a B.S. in entomology in 1938. He joined the Pacific Coast Entomological Society in 1934 and was an active member until he left the San Francisco area. He earned a Ph.D. in genetics from the California Institute of Technology in 1943. Dr. Hovanitz served on the faculties of the University of Michigan, Wayne University, the University of San Francisco, California Institute of Technology, University of California at Los Angeles and Santa Barbara and California State University at Los Angeles. His broad experience included work on insect systematics, mosquitos and malaria, the biology of plant galls and their relationship to cancer, the structure of chromosomes, and the genetics of butterflies and flies. He founded the *Journal of Research on the Lepidoptera* in 1962, editing and publishing it since its founding. At the time of his death, Dr. Hovanitz was preparing to return to his long delayed research on geographical distribution and population and physiological genetics, utilizing butterflies, especially the genera *Colias* and *Argynnis*, as experimental subjects. A basic principle in all his research was the importance of interpreting the significance underlying the phenomena we perceive, as opposed to simple description of the physical manifestations of these phenomena. His passing is a profound loss to science, especially Lepidoptera research. A complete obituary and bibliography will appear in the *Journal of Research on the Lepidoptera*, which will continue publication. — SCOTT E. MILLER, *Santa Barbara Museum of Natural History, Santa Barbara, California* 93105.

The main speaker of the evening was **Mr. Herman Real**, Department of Entomology, University of California Berkeley. His illustrated presentation entitled "Through the